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AUTHOR Gardner, Howard; Grunbaum, Judith
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ABSTRACT

Arts education and its assessment are discussed, with particular emphasis on the visual arts. Suggestions are made concerning the role of the National Assessment of Educational Progress (NAEP) in the arts. The curriculum which is presented in art education varies a great deal among schools. The assessment of art should include production, perception, and artistic thinking. Previous NAEP test items focused on perception and response to aspects of art, valuing of the arts, production in the arts, and knowledge about art. About three-fourths of the NAEP items require verbal responses. Items involving the evaluation of art and production are more valuable than items assessing attitudes about art. More performance items are recommended. About 20 tests measuring artistic perception and knowledge are briefly described, as are the qualitative methods of responsive evaluation, connoisseurship, critiques, and portfolios. The NAEP items were judged, in general, to perform as well as any of the tests. An alternative approach involving student portfolio is discussed. Suggestions for other approaches to consider involve artistic critiques, aesthetic reasoning, and the relationship of artistic activity to one's personal life and values. (GDC)

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The Assessment of Artistic Thinking:
Comments on the National Assessment of Educational
Progress in the Arts

Howard Gardner and Judith Grunbaum

Harvard University

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THE STUDY GROUP ON THE NATIONAL ASSESSMENT OF STUDENT ACHIEVEMENT

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The Assessment of Artistic Thinking: Comments on the National
Assessment of Educational Progress in the Arts¹

Howard Gardner and Judith Grunbaum, September, 1986
Harvard Project Zero

I. Introduction: The Scope of Arts Education in American Schools

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In contrast to other, more traditional and more established areas of the curriculum, assessment of progress in the arts poses a number of special problems. In some school systems, arts are either not offered at all or are merely electives; and even where the arts have been offered for many years, the course offerings and curricula differ from one site to another. Often, particularly at the lower grades, the curriculum is taught by the regular classroom teacher, who has had little or no artistic training; sometimes, and more likely at upper grade levels, classes are led by trained arts specialists or by itinerant experts. Some school systems may offer one art form, others a second, still others a whole menu of options. The arts are often considered to be frills, or even extra-curricular activities; and when the time for budget cutting is at hand, courses or teachers in the arts are likely to be among the first casualties.

Even if one puts aside the enormous differences in quantity or quality of artistic education, the question of what ought to be

taught in the arts, and how learning should be evaluated, remains highly problematic. There is at least a loose consensus about what the competent mathematical student should know, the optimal sequence of lessons and courses in physics, the scope and content of a textbook in American history.² And when there is disagreement, there is at least consensus on the principal options.

It borders on understatement to declare that no such consensus obtains in the area of arts education, and indeed it is difficult to anticipate what form such a consensus might take in contemporary America. Should there be a focus on skill, on enjoyment, or historical knowledge? Should individuals gain mastery of one art form or a smattering of knowledge across the seven lively arts? In many ways the area of arts education epitomizes what is best and worst about American education--course offerings subject to wide swings of popularity; curricula characterized by marked differences across and within even school systems; a wide range of models of effective teaching and learning; a decided ambivalence about any subject matter which borders on issues of personal value and might even be enjoyed by its participants.

II. The Plan of this Essay

This essay has been commissioned as part of a broad-based review of previous efforts to assess educational progress in American schools; a concomitant purpose is to offer suggestions which might guide subsequent efforts. The authors have not been involved in earlier efforts and in fact possess only a casual familiarity with these earlier efforts. We have, however, been students and observers of arts education in this country over the last two decades. Accordingly, we begin by sketching out the broad parameters of arts education as a field of study and then describe the background and the current terrain of arts education in America today. Building on this description we summarize the principal thrusts of earlier assessments and offer our own critique of the strengths and weaknesses of these efforts. We conclude with a sketch of the kinds of information which we hope can be obtained in future assessments.

In principle, our discussion should be applicable to all art forms, but because of reasons of space and expertise, we must restrict most of our extended comments to the visual arts. We note, in this context, that nearly all of arts education in America has been restricted to the visual arts, to music (primarily performance), and to literature (usually in English class). Classes in dance, drama, and other art forms are so exceptional as to be noteworthy.

III. The Dimensions of Arts Education

Until the last century, arts education was co-terminous throughout the world with artistic training. That is, involvement in the arts meant the gradual mastery of an artistic medium, such as pottery, painting, or piano. One entered into this process primarily through an apprenticeship, wherein one worked intensively in a studio or atelier of a master artist and ultimately acquired the requisite skills to join the guild or proceed on one's own. Assessment took place continually but was for the most part implicit: when the student advanced to a higher level of competence, fresh assignments would be posed and one's status subtly upgraded. Undoubtedly the perceptual and critical skills of the novice would be enhanced over a period of time; but such discriminatory and reflective skills would seldom be the subject of extended explicit discussion, and never so outside the context of daily practice. One learned "on the job".

Thanks in part to the influence of theorists like John Dewey and Viktor Lowenfeld, the focus on artistic production remains strong in American schools even today. To the extent that artistic education is emphasized, it is likely that younger children will have ample opportunity to draw, paint, and/or sing, and that older students will take studio courses or learn to perform band or orchestral music. Particularly at the younger ages, there is little pressure to perform in a certain way; the value of the

artistic activity is seen to lie primarily in the explorations per se. But with age, in a manner reminiscent of the atelier, there arises an implicit set of levels which the ambitious student must negotiate. Evaluations and progress are at least loosely tied to this progression. But because sequential curricula are the exception rather than the rule, and because teachers are rarely certain of what has been covered before, carefully-graded modes of instruction and assessment are infrequent.

Because we have moved so far from the medieval and Renaissance atelier, students are now exposed to these experiences in diluted fashion. Instead of an artistic master, one works in the elementary grades with a teacher who has had one or two classes in the fine arts, or, at best, has majored in art education. (At the secondary level, certification in arts education is the rule, but these teachers work with but a small minority of the school population.)

A fairly recent effort to recapture some of the rhythm and glamor of the artistic life has involved taking youngsters to artistic performances or studios, or, more frequently, having artists in residence in the class for a period ranging from two hours to two months. These practices reflect the belief that even a brief exposure to "genuine artistry" can have strong effects on children. While these residencies or "artist-in-education"

programs generally receive high grades from the participants, there is little evidence that they have any long-term effects.

Despite the continuing focus on arts production, there has been increasing consensus in America over the last century that arts education should extend beyond "pure production." (Such a consensus would not obtain in most other countries, where there remains little distinction between arts education and arts training). Inasmuch as most students are unlikely to become artists, even of a decidedly amateur sort, it is deemed important for students to gain some additional artistic knowledge-- knowledge which extends beyond the productive sphere. Once again, there is little consensus on the nature and extent of this education, but commonly-cited candidates include the ability to read musical notation, knowledge of common styles and genres, historical knowledge about art forms, masters, and techniques, acquisition of key artistic concepts and terms, and the capacity to effect discriminations of artistically-relevant techniques and concepts (like rhythm, texture, composition).

Once the gamut of arts education is extended beyond production, it proves possible to evaluate learning in a more systematic and reliable form. And, in fact, these efforts at teaching art history, criticism, and connoisseurship have often entailed regular evaluations which do not differ dramatically from those used for traditional subject matter. Thus students are given

objective tests which probe mastery of factual information or are asked to write term-papers on favorite artists or works. Less frequently, perceptual knowledge is tested directly in the artistic medium, as students are expected to choose the appropriate ending for a work of music or to make discriminations among three closely related artistic styles.

As professional organizations of arts educators have proliferated over the years, these groups have reflected some of the same tensions and uncertainties as beset the field as a whole. In general, however, the most influential leaders of the field have been sympathetic to an approach which extends "beyond creating." Thus in the 1960s and 1970s, visual arts education was dominated by major curricular efforts, such as those undertaken by CENREL, which have as their goal the introduction into the school of the basic "building blocks" of the arts. Units in texture, composition, rhythm, and the like were the order of the day. More recently, the Getty Trust has called for "discipline-based-arts education": DBAE gives courses in art history, criticism, and aesthetics the stature traditionally accorded to artistic production.⁴ There is no question that efforts like this have gained considerable national attention and have helped to energize the field of art(s) education, but their effects on actual classroom practice around the country have yet to be demonstrated and are probably very modest to date. In fact, standard textbooks and certain intra-professional initiatives

have had greater impact than these "pushes" from the outside.

We will detail below the ways in which previous National Assessments have incorporated aspects of production and of "discipline-based approaches." In our view these efforts have been praiseworthy, even heroic, but they have neglected an area of arts education which we deem central-- an area which we will term "artistic thinking." Because our critique of previous assessments revolves around their failure to foreground artistic thinking, it is appropriate at this point to introduce our own perspective.

IV Artistic Thinking

In the light of cognitive studies undertaken over the past few decades, including our own investigations at Harvard Project Zero (Gardner, 1982, 1983), we have become persuaded that the human mind is capable of diverse forms of thinking, which have been variously called "modes," "vectors," or "intelligences." On some accounts these forms of thinking are based on sensory modes (like visual or auditory), while on other descriptions they are linked to particular symbol systems like language, logic, or picturing. According to this cognitive perspective, individuals have the potential to develop competences in each of these modes of thinking. By virtue of initial proclivity or form of training, individuals will differ in their particular profile of

cognitive modes: nonetheless, the achievement of at least some competence or "literacy" in each form of thinking seems a reasonable educational goal.

This recognition of a plurality of intellectual forms has oft-times been yoked to a critique of contemporary schooling. Put briefly, contemporary schooling has shown a strong bias toward linguistic and logical modes of thinking, and a correlative de-emphasis (if not omission) of other forms. In fact this bias in the school system is sufficiently powerful and pervasive that, by a cruel paradox, even learning in the arts has typically come to be assessed using linguistic or logical forms of evaluation.

We differ from those who would claim that there is a single form of thinking called "artistic thinking." To begin with, we find that the differences across art forms-- from dance to poetry, from classical music to painting-- are sufficiently great as to render superficial and unhelpful generalizations about the nature or form of thinking across these fields. "Artistic thinkings" perhaps-- but no single form of artistic thought.

Moreover, our reading of the psychological literature suggests that a more fundamental category of analysis is the particular content or "intelligence" in question-- whether one is dealing with language, logic, spatial information, or information about persons (Gardner, 1983). Within each of these contents one can

distinguish uses which are artistic and those which are not. Thus an artistic use of an intelligence or symbol system exploits such features as style, expression, composition, and multiplicity of meanings, while a non-artistic use minimizes or actively avoids these "aesthetic features". And so, for example, a use of language which actively plays with stylistic, compositional, and expressive features will qualify as aesthetic; whereas another use of language, however skillful, which fails to exhibit these symptoms, will fail to qualify (Cf. Goodman, 1976).

In our view an educational system should foster development of each of the several competences or intelligences. This goal is independent of the question of artistry, for one could have a "highly intelligent" population with little or no aesthetic inclination-- a population which fails to show any interest in the aforementioned aesthetic features. Happily, we live in a culture which at least offers some recognition to artistic forms of thinking. Given this state of affairs, it becomes incumbent upon an educational system to train aesthetic sensitivities in the several relevant symbol systems (e.g., language, picturing, music, bodily gesture). By the same token it becomes incumbent upon a system bent on assessment to devise means of determining whether students are in fact mastering aesthetic forms of thinking within these symbol systems.

To the extent that a system focuses only on production, or only

on perception, it will by-pass significant aspects of aesthetic literacy--most especially those that require an interplay between perceptual and productive aspects. Moreover, to the extent that it carries out assessments which rely on (non-aesthetic) linguistic and logical modes, instead of assessing within the relevant symbolic system itself, the educational system will in many cases fail to assess accurately the competences of its students. Assessments must be "intelligence-fair" and "artistically-fair"--they must look directly at the artistic intelligence in question, and not peer at it through the "lenses" of language or logic. Indeed even sensitivity to poetry should be assessed primarily through aesthetic uses of language, and not through neutral linguistic forms.

V. Previous National Assessments in the Arts: A Description

Visual Arts: The National Assessment of Educational Progress (1981a), administered nationally in 1974-1975 and 1978-1979, surveyed four aspects of the visual arts: 1) perception and response to aspects of art; 2) valuing of the arts; 3) production in the arts; and 4) knowledge about art. To probe general attitudes about art, the students were questioned about such items as their artistic activities, their visiting of museums and galleries, their collection of artistic works, and the emphasis placed by their schools on the arts. Attitudes toward specific

works of art were also probed, by questions like "Do you enjoy looking at masks?" "Do you think it is important for you to look at paintings like this?" and by asking students to evaluate statements like "When a painting has a horse in it, it is usually quite good" and "it is best to accept the word of well-known art critics and authorities."

Art-historical knowledge was assessed in a number of ways. Students were shown four works and asked which had been wrought by a specific artist; shown a painting by an artist and asked to identify his style; asked to identify the country of origin of works of art, to place works in a chronological order, to assess the cultural or social purpose of a work, and to identify the method used to execute a particular work of art.

To assess the students' capacities to effect value judgments, they were asked to judge a number of paintings as very good, just okay, not good at all. In another item type, they were asked to select the best reason why a particular painting was a good work of art: reasons included 1) it has a number of circular shapes; 2) it has a powerful design; 3) it has a mother and child; 4) it has light and dark lines.

Production capacities were evaluated by giving students the opportunity to utilize design and imaginative skills. In one exercise students were asked to design "the most unusual piece

of jewelry you can imagine" and the products were assessed in terms of functionality, integration, and imaginativeness. In another item students were asked to produce six quick sketches of ideas for paintings. In a timed exercise of eight and one half to nine minutes, students were asked to develop the design for a package of a breakfast cereal. In a more focussed item students were asked to draw "a person who is very angry" making the "whole body show the person is angry."

There were also items assessing visual artistic thinking in the sense introduced in section IV of this essay. Students were shown four paintings and asked to select the one which had a compositional pattern which diverged from the other three. Note that such an item requires visual-spatial problem solving and neither depends upon, nor can be solved by, other forms of thinking (such as language or logic). Students were also presented a pair of paintings and asked to describe the differences between them. Responses were categorized on the basis of style, color, texture, technique, model character, and other formal/relational properties.

In all about 3/4 of the items on the Art NAEP require verbal responses.

Music: Two National Assessments (1981b) were also carried out in music. The objectives varied slightly across assessments but were

in general parallel to those which guided the visual arts: ability to perform music, to read notation, to identify and answer questions about important musical terms and concepts; familiarity with historical and cultural aspects of music; valuing music and knowing something about musical opportunities in one's community. Approximately ___% of the items involved listening to or producing works of music, while the remainder probed musical using linguistic or pictorial information. Because of the aforementioned limits in space and knowledge, our critical comments below will not extend to the musical realm.

VI. A Critique of the National Assessments in the Visual Arts

For the various reasons noted above, assessment of educational accomplishments in the arts is probably more difficult than comparable assessments in other areas. Keeping this into mind, we have little hesitancy in paying tribute to those who designed earlier instruments. These instruments are characterized by an admirable breadth, thus ensuring that nearly all conceivable areas are at least touched upon. Many of the specific items are quite ingenious and the profiles secured provide invaluable information about the kinds of things known (and not known) by a representative group of American school children.

In our view, given our attention to artistic thinking, the strongest sections of the NAEP are those which focus on aesthetic

responses to and discriminations of art: perceiving, describing, analyzing, and judging. These items require that the student look carefully at works of art, or at sections of works, and make discriminations and judgments based on artistic qualities like style, color, texture, technique, formal relations, and "modal character".

Also valuable are those exercises which allow students to exhibit their artistic creativity and skills. By giving the students considerable time and freedom, while still imposing some constraints, the assessors ensure that they can sample the students' technical skills and imaginativeness and yet secure some comparability across students.

Other sections of the NAEP elicit information which is interesting to know, but seems of much lower priority. In our view this precious opportunity to assess students' knowledge and competence should not be devoted to finding out about students' attitudes toward the realm of art and their knowledge about art in their community. Much of this information is available from general sociological studies. In any event, this knowledge can be readily altered and as such is neither of great significance nor central to artistic knowing.

Were there a uniform art historical curriculum, it would be worthwhile to assess students' knowledge of specific artists,

periods, styles and the like, just as American historical knowledge is assessed. As things currently stand, however, one is actually assessing the existence of rather than the quality of an art historical curriculum. Moreover, such assessments necessarily lean heavily on linguistic and logical abilities: without these abilities one will have difficulty in demonstrating one's historical knowledge--and to the extent that one is an expert at these types of tests, one may receive an artificially inflated score.

We have considerable difficulty in justifying those items which simply secure students' value judgments about works of art. We have in mind items where students are asked whether they like a work of art, where they are asked to evaluate statements about what kind of art is worthwhile, or items where they are asked for their stylistic preferences. In our view, it is virtually irrelevant which works of art are valued by students. These valuations are transitory, readily changed, and often unrelated to aesthetic aspects whatsoever. After all, one could go from a score of 0 to 100 (or from 100 to 0) simply by responding the opposite of what one actually felt. Complete inversion of one's score should not be possible on a good test.

Such a test should instead focus on the discriminations and classifications which students can make, and not on the positive or negative evaluation which they issue, possibly as an

afterthought or merely because such an evaluation has been requested. As we note below, it is valid to ask students for the reasons which undergird their preferences and then subject their modes and levels of analysis to scoring.

A brief word on other tests: While our task is to evaluate the National Assessment in terms of its own goals and our own standards, it may be relevant to say a word about other extant instruments. There are over twenty instruments currently available which purport to test one or more facets of students' competences in the visual arts alone. In the accompanying table, prepared by Grunbaum, we have attempted to characterize the principal aim of these tests.

Our admittedly cursory examination of these tests suggests that a few of them stand out in terms of the aspects of artistic thinking which we value. The Meier Art Test and the Graves Design Test present two images at a time, of slightly different composition, and ask the students to judge which design is superior. The Knauber Art Ability Test, which measures production, assesses such capacities as design ability, critical ability, sensitivity to contrast, imaginativeness, and invention. The Horn Art Aptitude Inventory presents an item in which several lines are shown and the student is required to create a drawing using these few lines. The Visual Skills Perception Test (Brigham et al, 1981) assesses cognitive skills of attention, perception,

TABLE --Gardner and Grunbaum

Tests of Perception	Meier Art Test	-excellent, similar to Graves and McAdory -careful attention to balance and tension of art work -comparative -requires sensitivity in looking at images -selection of best image
	Graves Design Judgement Test	-excellent -tests discrimination, sense of balance and design -tests aptitude for appreciation or production of art structure -employs intuitive aptitude
	McAdory Art Test	-tests perception and judgement -very comprehensive -similar to Graves and Meier -compares four items rather than two
	Education Through Visual End of Course Achievement Test	-measures perception -strong knowledge component
	University of Chicago, General Examination (Humanities Section)	-perceptual component
	Visual Skills Perception Test (Brigham, Grunbaum, O'Connor, Sullivan, 1981)	-tests taxonomy of Visual Art Cognitive Abilities, including perception, attention, analysis, transformation, synthesis -combination of perception and production test
Tests of Knowledge	Salt Lake City Humanities Test	-multiple choice -matching -completion -requires specific art curriculum
	Kneuber Art Vocabulary Test	-multiple choice -requires specific art curriculum
	Elsner Art Information Inventory	-four domains of art are tested

Tests of Comprehension	University of Chicago General Examination (Humanities Section)	-no example available -no example available
	Wilson Art Inventory (1968)	-no example available
Tests of Appreciation	Eisner Art Inventory	-attitudes about art <u>-gather important data about how attitudes or interests and how interests are followed through</u>
	Inventory of the Arts (Dunkel, 1947)	-no example available
Tests of Production	Horn Art Aptitude Inventory	-(1) timed element to drawing an assortment of items (circles, hat, open book, etc.) -limited inventiveness <u>(2) improvisation exercises to invent image from a few lines given.</u> <u>-an excellent item, allows freedom and creativity</u>
	Kneuber Art Ability Test	-tests abilities such as critical ability and observation, sensitivity to light and dark patterns in a composition, imagination and design ability, creative imagination, and the ability to represent an idea rather than mere physical imitation. <u>-this is a good test and suggests a more representative view of a student's creative thinking and abilities</u>
	Tests of Fundamental Abilities of Visual Art	-items include: -(1) recognition of proportion -(2) dot to dot drawing (imposes limitations) -(3) shading -(4) vocabulary

-this is a limited aptitude test

- | | |
|---|--|
| Selective Art Aptitude Test | - items include: Color Perception and Design
- suggests advanced training and ability |
| Visual Skill Perception Test | - tests production involving cognitives skills of perception, attention, analysis, transformation, and synthesis
- fourth grade level |
| Scale for General Merit of Children's Drawings (1913) | - standard of 14 subjects to rate drawings |
| Kline-Carey Scale (1922) | - scaled drawings |
| Free-Hand Drawing Aptitude Test (1928) | - Hull
- eight paper and pencil tests |
| Draw a Man Test | - Goodenough (1923), Harris (1963)
- measures intellectual maturity |

Qualitative Methods of Assessment

- | | |
|----------------------------------|---|
| Portrayal, Responsive Evaluation | - Robert Stake
- suited to the arts
- utilizes substantive and functional structures
- portrayal and holistic communication |
| Connoisseurship | - Elliot Eisner
- awareness and appreciation of characteristics and qualities of the classroom |
| Critiques | - used by art teachers for in progress evaluation, usually involves whole class, but can be done individually
- involves participant in learning experience
- an excellent method for |

		evaluation
	Portfolio	-Advanced Placement, College Board -allows for range of work to be evaluated, and enables longitudinal view of student work
NAEP	Preferences, Valuing Art	-p.27: this type of items places a good or bad connotation on preferences and does not determine what the students think about art work, or how they read or analyze a work of art
	Art History	-p. 35: questions reflect content of specific curriculum, which can vary from school to school
	Perceiving, Describing, Analyzing, Judging	-p. 43: very good section, indicates what and how students consider and judge art -p. 47: recognizing the theme, main idea, and principal features of works of art, excellent -p. 48-9: comparative items are an excellent way of quickly assessing styles according to themes, and features -p. 51 (lower right): mood items, an excellent, thought provoking item -p.53: judgement about qualities of works of art, relies on thinking -p. 58: Judgements about paintings by Klee, Gorky, deKooning, and Henri -this item demands that students have had training in reading art works--concern is that students don't know why they are making judgements - p.59: excellent item -however, requires student to have visual vocabulary

Production

p.64-5: does not adequately judge design skills, however good item in terms of imagination

p.68: six quick sketches for a painting.

- does not give students adequate time

- good that it is scored in terms of fluency, an open-ended creative problem

- p. 73: Commercial Design

- very good item, imagination within a structure, difficulty can be with organization of ideas

- p. 74-75: time too limited, however this is an excellent, expressive item that allows for individual differences

analysis, transformation, and synthesis. Emphasis is given to the ability to think through an artistic problem, rather than to skill in executing the task.

Summary evaluation In terms of its own goals, the National Assessment does about as well as any standardized instrument can hope to do. While we would quarrel about individual items, we do not believe that another set of consultants would have produced a clearly superior test.

On the other hand, as should be evident, we feel that the test is far too heavily oriented toward knowledge about the arts which can be verbally assessed. We would favor much less questioning about art historical issues and a dropping of the parts of the test which focus on sheer preferences and on attitudes toward art, as neither appropriate to nor essential for an assessment of aesthetic knowledge and sensitivity. We are in sympathy with the efforts to assess skills in artistic production and we applaud those efforts to measure directly artistic thinking, as in measures of sensitivity to composition, style, expression, and the like; were we to have the opportunity to participate in future assessments, we would encourage a greater concentration on these latter features.

While we cannot offer a parallel assessment of the musical measures, this capsule evaluation indicates the kinds of standards which we would be likely to apply and suggests the kinds of conclusions we would expect to reach.

VII. An Alternative Approach to Artistic Thinking and Assessment

On the conception of artistic education that we have been developing, artistic production remains absolutely central. In our view, it makes little sense to launch a serious educational effort in the arts without giving students the opportunities to paint, pot, write poetry, perform, and compose music. Admittedly, the provisions -- the human as well as the material resources-- have not always existed to make this possible, but active involvement in production should remain as a key goal and feature of every program. Moreover, where technical considerations earlier rendered difficult "production" by the run-of-the-mill student, the devising of inexpensive software now makes it possible for every normal individual to begin to draw or compose after just a few minutes of exploration. Thus, in the future, there will be even less of an excuse for curricula (or assessment instruments) which by-pass the processes of artistic production and creation.

But artistic production, while central, should not stand alone. Any serious artist is engaged from the first in multiple

forms of artistic thinking: in developing mental models of what he or she is trying to achieve, in making plans, drafts, and revisions, in constant evaluation and re-evaluation of what has been achieved and what still needs to be achieved. It is in the process of working with artistic media that the artist develops skills of perception and skills of reflection, and it is through a similar immersion in the "stuff of the medium" that students as well should become familiar with these partners of artistic production. We view proper arts training as indeed PROPER: and this convenient acronym, standing for production, perception, and reflection, captures well our own goals for education and assessment.

It is important to ask how, in the best of all possible worlds, such arts education could be carried out and evaluated. Our model includes a charismatic and reflective arts teacher (or arts team), who launches and then guides students in the completion of exciting and meaningful projects. In the course of such projects, students will spontaneously come to acquire key artistic skills; and, at the same time, they should begin naturally to make relevant discriminations and to reflect, with increasing articulateness, about what they are achieving and what they are trying to achieve. In our ideal arts environment, we would unite the rigor and the intensive involvement of the atelier, with the exuberance, informality, and the periodic reflectiveness of the philosopher who "thinks on her feet".

In the traditional atelier, there is scant need of formal assessment techniques-- the student's work "speaks" or "looks" for itself. However, in the modern era of decontextualization and accountability, such naturalistic approaches rarely suffice. What has come to replace them, at the pre-professional level, is the portfolio, a collection of the student's key works, which can serve as a kind of capsule summary of what the student has done and what his or her concerns have been. Portfolios of works (or their performance counterparts, auditions) are widely used by skilled admissions officers and contest judges: whatever their limitations, such collections can successfully be employed over significant period of time to pick out those who have promise as well as those who have already achieved something of artistic significance.

It is our contention that the portfolio is portable, and that it can be used as well in ordinary classrooms for ordinary students. Portfolios need not be restricted to finished versions of one's best work (though they can well fulfill this purpose); they can as well be (or serve as) diaries, as commonplace books in which one collects favorite works or passages by other individuals, as in-depth examinations of the development of a single work, or as more superficial surveys of a student's overall evolution over a lengthy interval. Portfolios can include reflections, self-evaluations, comments by others (teachers, experts, peers,) other forms of notation, inputs in

several symbol systems. They can be extremely personal.

In short, portfolios may serve as a record of the development of an individual's thinking over a period of time in one or more art forms. At the same time, they are a good indicator of the effectiveness of teaching and learning in a given school environment. And, as such, they ought to be susceptible to systematic evaluation on a number of relevant dimensions.

There have been some previous efforts to make the assembling of portfolios a central feature of art education. Many arts schools and a few regular colleges have required or recommended portfolios; and portfolios have also been part of the Advanced Placement Program of the College Board. One particularly thorough effort has been carried out by the Prospect School in Bennington, Vermont, under the direction of Patricia Carini. During the 1970's the North Dakota Study Group on Evaluation, which included Carini, Vito Perrone, and Brenda Engel, devoted considerable effort to the implementation of new forms of data collection and, in conjunction with the Educational Testing Service, addressed the issue of how these accumulated materials might be evaluated (See Carini, 1982; Engel, 1977).

We believe that it should be possible to build upon these efforts and to arrive at reliable and valid means for assessing student portfolios in the arts. In fact, in conjunction with the

Educational Testing Service, and with the support of the Rockefeller Foundation, we are seeking to implement just such an effort at the present time.

In describing the portfolio approach, as a way of monitoring production, perception, and reflection skills, we are aware that such a program would not be easy to implement. At the same time, we certainly believe that it could be implemented, and that it might prove attractive not only in the arts (which might be seen as its 'natural' home) but across other areas of the curriculum itself.

Yet, even if a portfolio method were to become central in arts education in this country, one must still raise the question of its utility in some kind of national assessment effort. As currently envisioned, these efforts should involve isolation of students from others, in order that they may take a scorable examination within a short period of time. What could be more remote than a portfolio-- a personal statement which captures work over the course of a year or more?

To this legitimate question, we offer three distinct answers:

1) One could dispense altogether with a standardized test in the arts and instead rely on the careful examinations of selected portfolios at selected sites. This is, after all, what arts award

committees routinely do. Perhaps as much could be learned by soliciting and subsequently examining twenty portfolios at twenty randomly selected schools as is currently learned by sampling 2500 students at several sites. Certainly, in our view, what would be learned is far more central to artistic practice than the information gained from large sections of the current assessment package.

2) Short of including a portfolio proper, one could devote a significant portion of the current test to portfolio-style items: asking students to produce 1-2 works, show their preliminary plans and sketches, reflect upon them, evaluate them, etc; and/or one could reproduce a sample portfolio and ask the student to organize and evaluate that portfolio.

3) One could approach a subset of the students who take the current assessment and procure from them a portfolio- either one that had already been assessed or one that would be assessed under guidance in a reasonable period of time. This "compromise" solution would allow both forms of data to be collected and also help to indicate the relationship between performance on a standard assessment instrument and artistic thinking, as more directly observed.

To our way of thinking, the artistic portfolio is key to any revised approach to assessment of artistic learning and

achievement. We feel that standardized instruments have reached their practical limits: especially in a personal expressive medium like the arts, a far more "ecologically valid" instrument is needed.

In addition to the portfolio, we propose several other ideas which might also be relevant to a re-thinking of current assessment measures:

1) Artistic critiques. In most art schools, a crucial part of the learning occurs in critique sessions, where both students and teachers comment constructively on the works of other students. Here language (as well as other symbols systems) can be used directly to point up aspects of the works which are more or less adequate and to offer suggestions for alterations. Assessment in the arts ought to include skills in critiquing; these skills could be measured by having sessions carried out in front of assessors and/or reproducing aspects of critique sessions on an instrument of evaluation.

2) Aesthetic reasoning. In recent years, most psychologists have concluded that an individual's reasoning in the moral realm is at least as critical as the particular decisions he favors on a controversial issue, and that such reasoning develops according to a describable pattern (Kohlberg, 1969). The work of Parsons et al (1978) and others indicates an analogous kind of

developmental progression in the domain of aesthetic thinking. In these discussions, carried out with Piaget's method clinique, students have the opportunity to explore concepts at length and to develop their own ideas. Assessments of these discussions ought to focus not on judgments per se (as many do) but rather more on their underlying reasons: toward this end, students ought to be asked to discuss controversial aesthetic issues (orally or in writing) and their levels of thinking ought to be systematically assessed.

It should be indicated that linguistic and logical abilities will indeed be relevant to students' success on these tasks; but at least these intellectual capacities will be marshalled towards the understanding of issues which are important in aesthetics and art criticism.

3) The relation of artistic activity to one's own personal life and values. Nearly everyone who is deeply involved in the arts recognizes the extent to which one's activities and attitudes come to reflect issues of personal importance.⁴ One does not choose an artistic subject at random; nor are our preferences dictated according to an impersonal algorithm. Yet, nearly all instruments seek to exorcise these elements, and to treat arts as if they are as "person-" neutral and as "value-" neutral as the physical sciences.

While we do not place much importance on students' attitudes toward the arts as a realm of activity, it is useful, in our view, to secure information on how students' artistic activities relate, or fail to relate, to their personal lives and to their most cherished values. Also of interest is the extent to which students' self esteem and status with others are affected by their involvement (or non-involvement) in artistic activities.

Short of ethnography or projective tests, it is not easy to envision how information can be elicited on this important topic. Portfolios might serve as one possible source of information. However, given that one is dealing here with highly sensitive information, it may not be possible (or proper) to investigate this topic, save in a way which safeguards anonymity.

VIII. Concluding Note: Enacting a Utopian Proposal

We are well aware that some of our suggestions do not seem realistic, particularly in the present "back-to-basics" environment. Indeed, given present practices and prejudices, it is more likely that an assessment in the arts will be abandoned altogether (a definite option, as we understand it); or that an even more rigorous, "discipline-based" regimen will be instituted.

Precisely because of the precariousness of an arts assessment altogether, however, this situation may be perceived in a much happier light, through a dramatic reversal of perspective: as an opportunity to spurn old models and to attempt an approach which is innovative, daring, and, if successful, of signal significance. Perceived in psychometric terms, arts assessment is virtually an oxymoron; yet, viewed in terms of the daily practice of an artist, assessment is ubiquitous. We favor an approach which attempts to capture as faithfully as possible the practice and the practices of an artist, an approach which at once taps aspects of production, perception, and reflection within the artistic medium. We feel that such an approach can be carried out: we are prevented less by a lack of measures than by a failure of nerves. A successful assessment in terms of artistic thinking would not only do credit to the discipline of arts education; it might also serve as a model for more ecologically valid instruments, and more direct tests of thinking in other domains of knowledge as well.

Footnotes

¹Note: This essay was commissioned by H. Thomas James, director of a Study Group which is seeking to strengthen the national assessment of student achievement. Work described in this essay has been supported by the Rockefeller Foundation and the Spencer Foundation through grants to Harvard Project Zero. We are grateful to Alberta Arthurs, Elliot Eisner, Lonnie Jones, Joanna Moore, and Bennett Reiser for their extremely helpful comments on an earlier version of this essay.

²In a personal communication to the authors, Elliot Eisner questions the extent to which there is a consensus in fields like history or physics. From his perspective, such proliferation of paradigms is a virtue, not a vice, so long as the specific paradigms have educational virtues.

³In the aforementioned personal communication, Eisner provides some context for DBAE. In his view the ideas supported by the Getty Trust were already put forth in the middle 1960s but did not take hold in the schools. The major thrust of DBAE is not to tie children down to academic learning but to provide substance to school programs and to provide the range of content that a solid program in art education ought to have.

⁴In a personal communication to the authors, Lonnie Jones mentions

an award winning program at the Memorial High School in Elkhart
Indiana where the teacher explicitly used students' personal
tragedies as a central component of teaching.

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